6. "Geological Remarks on Kerguelen's Land." By R. McCormick, Esq., Surgeon R.N. of H.M.S. Erebus. Communicated by the Lords Commissioners of the Admiralty.

The northern extremity of the island is described as being entirely of volcanic origin. The trap rocks, of which the headlands are composed, form a succession of terraces nearly horizontal. Basalt is the prevailing rock: it assumes the prismatic form, and passes into greenstone, and the various modifications of amygdaloid and porphyry. The general direction of the mountain-ranges inclines to the south-west and north-east, and they vary in height from 500 to 2500 feet. Many of the hills are intersected by trap dykes, usually of basalt. Several conical hills, with crater-shaped summits, are found, evidently the remains of volcanic vents. Three or four very singular isolated hills, composed of an igneous slaty sandstone, occur in Cumberland Bay, presenting very smooth outlines, and consisting of piles of broken fragments, through which the mass protrudes, in places, in prismatic columns. Vast quantities of *débris* are accumulated at the base of the hills, in many places to the height of 200 or 300 feet or more, affording strong evidence of the rapid disintegration this land is undergoing, from the sudden atmospheric vicissitudes to which it is exposed.

The whole island is deeply indented by bays and inlets, and its surface intersected by numerous small lakes and water courses. These, becoming swollen by the heavy rains, which alternate with frost and snow, rush down the sides of the mountains and along the ravines in countless impetuous torrents, forming, in many places, beautiful foaming cascades, wearing away the rocks, and strewing the platforms and valleys below with vast fragments of rocks and slopes of rich alluvium, the result of their decomposition.

The most remarkable geological feature in the island is the occurrence of fossil wood and coal, and what is still more extraordinary, these are imbedded in the igneous rocks. The wood, which is for the most part highly silicified, is found enclosed in the basalt; whilst the coal crops out in ravines, in close contact with the overlying porphyritic and amygdaloidal greenstone.

A few outline sketches of the rocks and scenery, in various parts of the island, accompany this paper.

A paper was also in part read, entitled, "On the proportion of the prevailing Winds, the mean Temperature, and depth of Rain in the climate of London, computed through a cycle of eighteen years, or periods of the Moon's Declination." By Luke Howard, Esq., F.R.S.